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Procedia - Social and Behavioral Sciences 105 (2013) 38 – 47

Procedia
Social and Behavioral Sciences

AicE-Bs2013London
Asia Pacific International Conference on Environment-Behaviour Studies
University of Westminster, London, UK, 6-8 September 2013
"From Research to Practice"

Research-Practice Paradigm: An Asian perspective

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Abstract

This keynote paper examines the position of global south in world scenario and calls attention to the urgent need of a responsive architecture to counter the negativities and callousness that is seeping into the built developments due to rapid economic growth. It discusses the nature of a responsive self-practice & observations of a recent research on learning environments, with focus on environ-behavior studies. It discusses the dire need of vital enrichment of policy and practice. The paper makes a case for E-B studies by exposing new challenges, nascent fields and the need to fine tune application of local and traditional learning enriched through people's experience and feedback in the Asian context.

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Selection and peer-review under responsibility of Centre for Environment-Behaviour Studies (cE-Bs), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia.

Keywords: Global south; E-B studies; challenges; responsive practice & research

1. Introduction

This paper is based on the keynote address to be delivered at the AicE-Bs 2013 conference at London. The global characteristic of the platform is acknowledged in positioning the theme of the paper. It addresses the issues and concerns that abound the global south and highlights the challenges in the Environ-behaviour arena.

With more than half a century of E-B research on how the environment influences people's behavior and their well-being, the arena of E-B studies has risen to a commendable position in the global north. This paper investigates the status of the field in the global south, analyzes its contributing reasons and suggests a multi-pronged strategy to further E-B studies in the subcontinent through policy, practice and pedagogy for the betterment of the society at large. It discusses the nature and contributions of a responsive architectural practice and the learnings of a recent research on learning environs, as a pertinent typology from point of view of E-B field.

2. Challenges on ground

The arena of E-B studies is intrinsically influenced by ground situations socio-cultural, politico-economic, climatic, technical & demographic. While all factors contribute in a significant way, burgeoning demographics coupled with volatile political set-ups mark an important factor of the global south. Despite the phenomena of the shrinking world ushered in by virtual technology (Friedman, 2006) this characteristic is unique to the region. The fallout of a population burgeon most affects physical development. Perceived as the most visible manifestation of progress, the built assumes great importance. Yet, in order of priorities, the finer sensibilities of the art of building are overlooked.

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One such is the immense importance of the impact exerted by the built container upon those contained within its spatial confines. (La Gory & Pipkin, 1981; Lawson, 2001). Such an understanding, which is the basis for E-B arena has far from arrived. The vital importance of E-B studies is understated. It is development for its own sake.

While this is one of the dividing lines between the First World and the Third World, a shrinking world manifests a very visible phenomenon. Each world encompasses trappings of the other in isolated pockets: of prosperity and well-being in the midst of chaos and poverty and poverty and impoverishment in the midst of great economic development. Frampton (2009) observes that whichever the case, the attitude towards the environment as a whole is getting increasingly barbaric. A great deal of inauthentic, acritical and insensitive building is occurring world over. Happily, incidental architecture of richness and subtlety may be found world over simultaneously. In a situation of stark contrasts, this is a tiny semblance of similarity between the global north and the global south.

3. Making a case for E-B studies in the Indian subcontinent

The paper focuses on the Indian scenario and makes the following observations regarding critical issues that influence this arena of development.

3.1. Demographical composition

Fig. 1 shows comparative global demographic composition. With a population upwards of 1.2 billion, India ranks second in world-wide comparison. A plethora of subcultures, languages, lifestyles, culinary habits, religions and cults makes for an intricately heterogeneous composition of the populace. A democracy by default (Sen, 2005) its socialist commitments colour most societal endeavours.

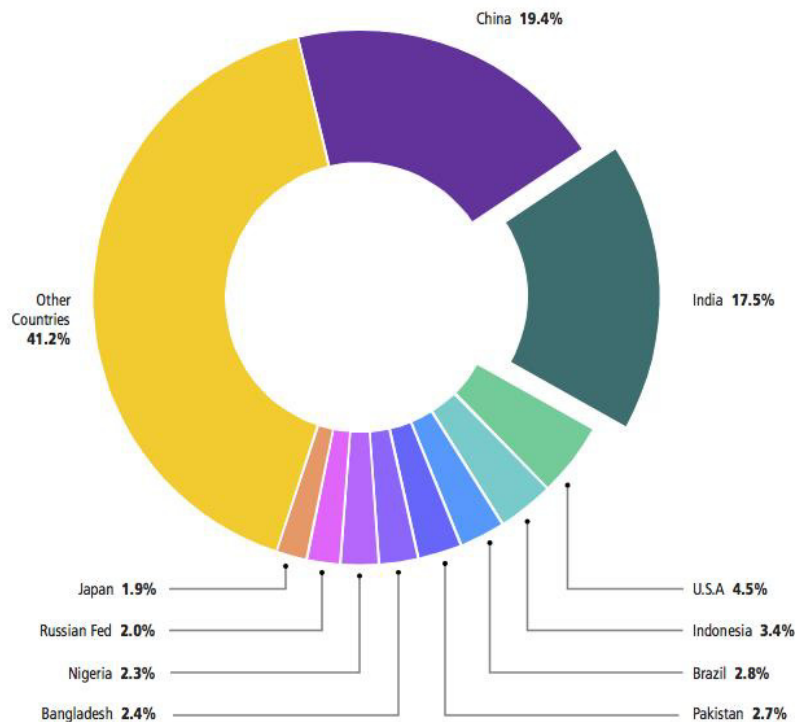


Fig. 1. Global demographic comparison
Source: <http://www.censusindia.gov.in>

3.2. Status of E-B studies in architectural education in India

The Council of Architecture (Handbook of COA, 2011) mandates registration of architects and regulates minimum standards of architectural education. Following data portrays the status of E-B field.

- Schools of Architecture: 338
- Students graduating each year: Approximately 3000
- Masters programs offered in: Approximately +47 schools
- Doctoral programs offered in: Approximately +12 schools
- Chartered architects in India: Approximately 60,000
- E-B Studies as a core or optional subject: NIL

Miniscule stand-alone research and development in this arena, in some corners, cannot be ruled out. Although an accepted IT hub, e-documentation is still under-developed, thus networking on the research end is lagging. Mainstream research eludes the E-B field. Despite half a century since its formal understanding and various contributions since then, E-B arena still remains unacknowledged in a nation holding approximately 1/6th of the world's population as the data indicates! The critical need of a humane point of view in the developing urban scenario makes for an enormous challenge.

3.3. The current trends in built environment

Despite the vacillating global economic depression, India displayed a GDP vacillating between 4% in 2002-03 to 5% in 2013 peaking to a high of 9.5% between 2005-11. Correspondingly the building industry and urbanization displayed a comfortable growth (<http://www.tradingeconomics.com/india/gdp-growth-annual>). Figure 2 previews the many ways in which the built is being manifest. Architectural profession still relies and borrows liberally from the global north. Architectural effort hinges upon the creation of a captivating expression. Technology transfers and the alluring imagery of contemporary built forms that are being juxtaposed upon a land that is still steeped in the traditional feel strange and alien. The undue focus on the visual expression is lopsided, given the fact that user responsiveness is not priority. This makes it fit case for an urgent need for a studied approach to E-B studies.

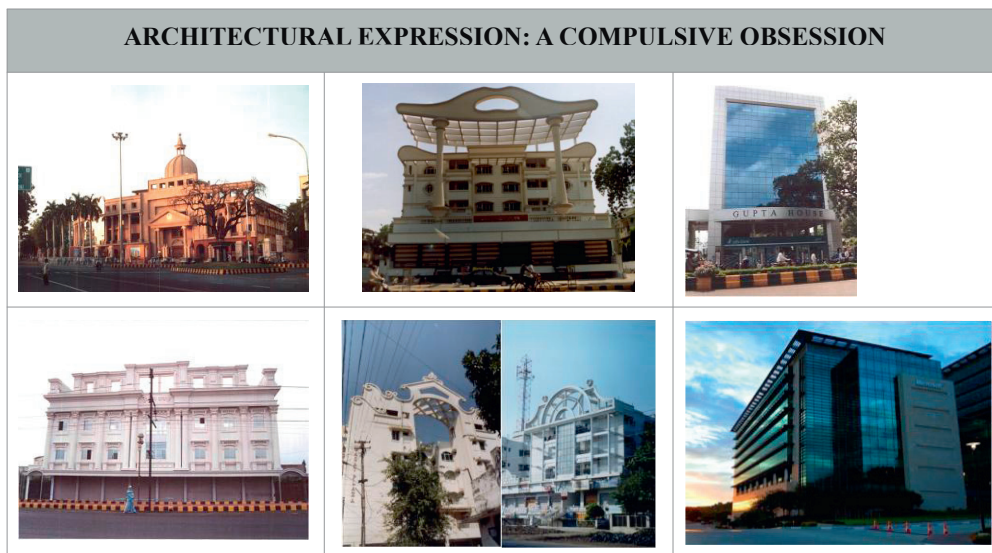


Fig. 2. Alluring imagery of the contemporary built: A strange juxtaposition
Source: Author

Even as these points make for a valid argument, Salinger (2003) summarizes this situation in a succinct manner,

“Our civilization appears to be so complacent with its recent technological progress that it does not recognize threats to its very existence. We are distracted by technological toys and are not applying our scientific knowledge to keep our society in healthy working order. More traditional cultures are aware that something is dreadfully wrong, but they don't know how to react in a constructive manner.”

The possibility of recognizing the wrong is jeopardized due to yet another dimension that marks our shrinking world. The global south communicates through ideas that belong to the global north influenced by the powerful media and the publications. The wisdom of local building traditions imbibed over ages, its actual application as a vigorous & intelligent effort is shirked at large. In the process, something is going seriously wrong. The gap is large indeed! There is much aping and less reflection. As this famous quote by Jung points out,

*A shoe that fits a person pinches another,
There is no recipe for living that suits all cases.*

Despite pinching shoes, the capitalist bent of attitudes and images suits well the market forces in emerging economies. In this scramble for ‘development’ and ‘nation building’ most other dialogues take a back seat. The erosion of values is real. Ironically, in this process, one of the most vulnerable arenas, that is assigned a low rank in the list of priorities is that of environ- human relationship.

The Asia-Pacific conference is an opportunity to address the evolving global positions. In a world of handshakes and shrinking communities, we can no longer stay unaffected by what happens in the other parts of the globe, especially when its magnitude is considerable. The realization that the action in this millennium is in the global south is imperative.

A much richer dialogue has to center on the global South, the emerging East for the betterment of the human environs. There is dire need for us, in Asia and Africa, to build a critical mass of academicians and theoreticians who can articulate a relevant debate much more strongly. We need reforms in our education systems to address issues and concerns that are pertinent in our contexts. We need public awareness and action on ground to help inform new ways of looking at architecture and the built environment (Mehrotra, 2012).

The architectural narratives have to focus upon critical needs such as the following while keeping in view environment-behavior relationship that is intrinsic in each arena.

- A relevant architecture for the place;
- An appropriate climatic response in these times of energy crisis;
- Issues of technology & suitable materials within a cost effective framework;
- Issues of crafting buildings that are hand-made & thus labour intensive, keeping in view our intense human resource;
- Addressing questions of sustainability. In this arena also, western paradigms are relied upon which are not applicable in our contexts;
- Issues of education for the population at large, for all the inhabitants are stakeholders of the built environment; and
- Relevant research and publications addressing issues on the ground & their dissemination.

4. Learning from a responsive practice

The author wishes to refer to a self-practice in architecture that has been endeavouring to create a responsive built environment as a challenge to the situation portrayed above. It is an attempt at devising and implementing an architectural language based on the rich traditions of the past & assimilating Indian principles encompassing freedom & responsibility, creativity & common sense, continuity & growth, problem solving with creativity, aesthetic aspirations and construction technology, crafts & craftsmanship, within a contemporary framework (Khan, 2012). To create an architecture, for the people, which belongs to the land and its ethos is the first step towards humanizing it. In doing so, it is hoped that it would be a positive step towards human well-being. ‘The 10 commandments’ which are basic principles of the practice are enlisted below and illustrated in Fig. 3.

- continuum of tradition
- imaginative use of traditional building techniques, space and volume
- recycle reuse

- innovative finishes and a traditional building vocabulary
- use of local natural materials
- respect and rejuvenate local people and their economy
- respect for local climate, context and culture
- respect for man and nature
- non-industrial building methods
- reinventing and reintroduction of traditional building construction techniques

The 10 commandments have helped arrive at an architecture that is contextually relevant. It has imparted a flavor to the built environs and the spaces within them, that makes for the long lost nostalgic connect. A sense of quiet aesthetics that the stark modernism had wiped out in its medley of forms is sought to be achieved through the design conception. Such architecture has been well received and wholehearted accepted by the clients. Due to its success, many young students have taken it up for case studies.

4.1. Need for synergizing practice and research

Making of this architecture was affected by self-trial and error methods on ground. Unison with academic researchers would have made the process different. Studied research inputs can be valuable to give concrete expression to the many aspects of design. In fact, each of the 10 commandments opens up field for further research and development. User response and feed back in experiencing and using this kind of architecture both from technical-functional as well as metaphysical-behavioral point of view would aid in revising and re-working upon this contemporarily vernacular built & aid in understanding the relevance of such an experiment.

The absence of a strong practice-research paradigm, is widely felt. Some pre-emptive practitioners have independent cells for back up research and dissemination of knowledge. Architect Doshi's Vastushilp Foundation (n.d), Laurie Baker's (n.d) experimentations in appropriate affordable building techniques and Kamil Khan Mumtaz's Anjuman Mimaran (n.d) an institution to disseminate traditional building skills amongst skilled craftsmen are a prominent few in the Indian sub-continent. The Central Building Research Institute (CBRI, n.d) at Roorkee is a government funded organization. Building codes find such inputs of great value. The human element as focus is still an unattended area.

Post Occupancy Evaluation, which is an established concept in the West has yet to arrive in India. The technical-functional aspects of human comfort have found reflection and response in the form of policies and building codes. The meta-physical-behavioural gets lip service and a nodding acknowledgement. Policies bypass it and practice leaves it to intuition. The need of the hour is a strong collaboration of the academia and research with the practice, so each shall take cue from the other, share and grow symbiotically.

Educational orientation has a contribution at this end. Architectural pedagogy in the Indian sub-continent focuses primarily on the design of the built through drawings; which is the 'designated language of the architect'. Very few schools allow a research-based inquiry, even at final thesis level. Thus exposure to reading, writing and understanding research lacks in the basic training of the professionals. Few architects are able to articulate on the issues and concerns that effect their practice, leave alone lateral research pre-occupations. This gap is compounded, as many practitioners expressed difficulty in comprehending the crisp technical lingual expression of research. The academia has to take a step forward and pen research works in a user-friendly format for dissemination of findings and learnings in a diversely positioned architectural fraternity to be of help to the busy practitioner.

There is also dire need of an aware, sensitive and responsible client base. Education of the society in environmental design matters should be given highest priority, beginning at high school level. Frampton (2009) emphasizes this as the first point of his seven point manifesto for the millennium. Nowhere more than the Indian sub-continent, is this closer to truth. Unless aware pressure groups become an active force, very little shall be achieved. Widespread intellectual debate has articulated this issue, yet action on ground is far from satisfactory. Problems of application and execution are far more complex, and the point where most endeavors face disaster.

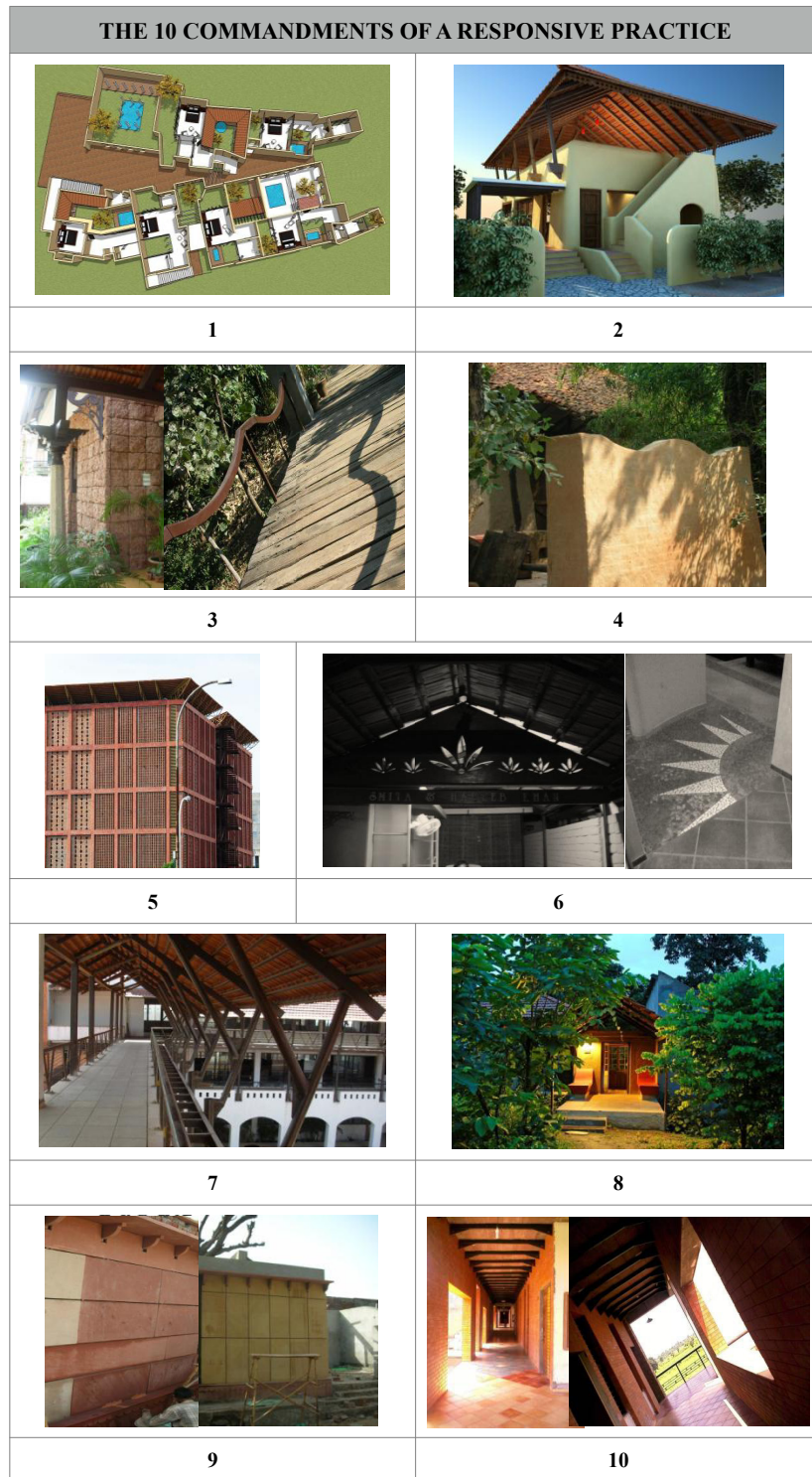


Fig. 3: Ten Commandments of a responsive practice
Source: Author

5. Learning from research: A case for policy and practice

Learning environs have great stakes in early sensitization, for these are the spaces within which behavior and character are moulded. (Day, 2007; Hill, P. et al, 1990) A recent research enquiry by the author focusing upon the urban secondary schools finds deep relevance in this discussion. These cater to the upwardly mobile middle class that is educated, urbane and represents –approximately 25% of the demography. Their number is small, yet their predominant urban existence makes them most prone to the urban malaises.

The numbers of private urban schools have had an exponential rise in the recent times. These are schools designed by architects and support a basic education that is regulated by a policy framework and affiliation regulations that mandate adequate infrastructure. Are these environs child friendly? Are they affording the advantages of a benevolent built? How conducive are the built surrounds for a wholesome all round growth? What behavioral influences are acting upon them? These queries formed the basis of the study on urban learning environs.

The burgeoning middle class and its spatial experiences within the urban built is not a socialist peeve. In a demographically unwieldy nation, the school as a typology exists in many layers. As a socialist nation, any action centered upon the underprivileged is lauded and finds support, by GO-s and by NGO-s. Most research thus centers on appropriate technology, virtual classrooms, safe drinking water and sanitation (Technical note, GoI& UNESCO, 2012; NSSI, 2012).

The research study looked for something beyond. For true to the dichotomy of the land, this is as much the need as sanitation and water. Ironically, this thought process is still alien to many in India. As a nation on the path of progress, it is essential to ingrain attitudes supportive of a humane development at the outset. It is also time to spread awareness of the impact of the built over human behavior&well-being. It is essential to spread awareness of its vital significance into the public domain, so that people at large shall work towards and demand a user-sensitive response from the built they inhabit.

Currently most learning and applications in the arena of environ-behaviour studies are drawn from the rich database of the western world. Lack of indigenous research is deeply felt at every step. The author's active pre-occupation in form of doctoral research brought to fore many issues of the learning environs of schools with regards to child friendliness. A rigorous POE conducted in more than a dozen urban schools, with students as major respondents, brought forth facts worth considering.

5.1. Nature of education system: A societal attitude

Indian education solicited international attention when President Obama, remarked that Americans need to learn from Bangalore and Beijing. His contention was that students from there were “working harder than ever and doing better than ever”. He urged American students to rise to the challenge to determine success in the 21st century (Times of India, 2010).

Quick to follow was the documentary, comparing education across 3 countries vying for top corporate jobs on a global platform titled, ‘Two Million Minutes’ (Compton, 2009).

In a nutshell, a very contrary state of affairs exists on ground. While a few selected products of the system, are successful in a global rampage, there is much that needs attention in reality. As contended in the documentary, education is indeed the mainstay of a child's life and that of his family in middle class India. It is a major familial preoccupation. This larger than life emphasis on education which focuses on what is an ‘acceptable educational menu’ makes it single tracked in its essential nature. The emphasis on always being the winner makes stress an integral part of school life from a very early age. School is followed by homework is followed by tuition. There is time for very little else. The evaluation system judges even co-curricular activities such as dance, arts, music, drama with marks. Competition is a stark reality of a student's life in every sphere of engagement.

The school environs & the process of teaching –learning currently in vogue, make individuals who are fiercely competitive, tenacious and capable of endurance. On the flop side there is insecurity, insensitivity and an over-riding lack of belonging that finds reflection in the society at large. Research across the globe endorses this link. (Eccles, J, et al 1993, Feldlaufer, H. et al; 1988; Ames, C. (1992). Evans, G. W. (2006). We stand proof on ground.

It catapults the challenge of school learning environs, to be supportive, benign and capable of nurturing a sense of belonging & emotional comfort in the young students; an atmosphere that shall be an antidote to the stress; a conducive teaching-learning environ where basic lessons can be imbibed in happiness, within the bounds of disciplinary & functional integrity of the school.

5.2. Critical need of an appropriate environmental response

A visual preview of some urban schools under study is shown in Fig. 4. Most schools are populous, with upwards of 2500-3000 students from class 1 to 12. In a sense, these are a sub-set of our national status. Along with studies, we learn to jostle for attention, for space, for making ourselves to be heard.



Fig. 4. Urban Indian schools: A visual preview
Source: Author

It goes without saying, that as a typology fit for imparting positive lessons, school environs need to be vitally inclusive & child friendly: much more so given the challenges that our schools offer. What is the status of our schools? Post Occupancy Evaluation of 14 private urban schools holding consistent affiliation and academic record, brought forth the following observations. Eleven identified child centric parameters vacillate between poor and average level. Those that have strong behavioral impacts score the least. It is indicative of the scope of research and inputs necessary (refer Table 1).

Table 1. Status of child centricity in Indian urban schools

#	CHILD CENTRIC PARAMETERS	RATING WISE CLASSIFICATION OF SCHOOLS		
		POOR LEVEL	AVERAGE LEVEL	VERY GOOD LEVEL
1	Spatial Configuration	-	11	3
2	Visual Expressions	-	7	7
3	Child Scale	4	10	-
4	Spatial Cognizability and Legibility	-	6	8
5	Hierarchy & Defensible Space	11	3	-
6	Interior/ Ambiance	1	12	1
7	Physical comfort in interior spaces	7	5	2
8	Ergonomic	2	10	2
9	Personal and Social Space	10	4	-
10	Sense of Belonging	1	11	2
11	Teaching- Learning Environs	2	11	1

Source: Author

Inputs are vital in 3 arenas:

- At the end of the students: There is need to respond to the intrinsic requirements of student users, in a world created by adults. This is essential to prevent marginalization and to impart valuable lessons on the potentials of the spatial built environs to be supportive and caring. Subtle lessons unconsciously imbibed shape positive attitudes. This is a crucial need of our society at present.
- At the end of the regulatory statutes: Policies and its regulations fall short of addressing the user, both at the educational framework end as well as at the end of the building regulations. This pinpoints the gap in governing school education and its built environs. Policy decisions are inadequate and incomplete without a studied approach to the vital issues of user centric environmental design. Architects are a reticent community. Our abysmal representation on the planning boards is responsible for bureaucrats summarily framing policies with little knowledge of the critical implications of environs on users.
- At the pedagogy and practice end: The traditional pedagogical approach with its deep emphasis on the form and the contemporary materials and technology is shaping the architectural practice. Newer ways of looking at the built environs are yet understated. Environ-behavior studies are not part of curricula in India. An awareness of the user and his problems and the potentials and limitations of existing settings to cater to them shall open a new way of perceiving the built environs. Continuing education is also a recent concept. E-B studies need initiation to sensitize practitioners towards critical needs of categorized users such as children, aged and the elderly, women and the differently challenged to mention a few.

Transformation of pedagogy, in this manner shall usher in a more responsive & responsible practice in course of time.

6. Conclusion

This paper addressed the arenas the author has been involved actively in. It is representative of the ground situation in most developing regions where the stakes are profoundly influenced by demography and economics and also a lot of politics, due to the massive investments that such developments mandate.

An architectural language deemed relevant to its context is making a miniscule presence. Its acceptance is slow but steady. Yet, the craving for an iconic architectural presence still exists. We tend to borrow liberally from the global north, in a skewed convenient manner.

Nevertheless, a small section of the society has started perceiving humane attitudes that such an architecture embodies. By respecting and recasting experiences close to the Indian way of life, the user is slowly coming into focus. Environ- behavior studies are now imperative to make him the backbone of every built endeavor; for it is the user, for whom the surrounds are conceived!

In conclusion, a re-iteration of a multi-pronged strategy is deemed fit.

- Environmental design education to be initiated at high school level.
- Architectural pedagogy based on POE and learning from ground realities
- Continuing education for practitioners
- Easy to refer publications
- Synergy between academics, research and practice with a hand-on approach
- Relevant inputs into policies; a more proactive role of the profession at large into policy frameworks
- Encouragement and support of indigenous research and compilation of a relevant user-friendly data base.
- Lastly, an emphasis on increasing global research collaborations across the spectrum of architectural and planning engagements.

The keynote does not put forth new concepts, but exposes new challenges, nascent fields and the need to fine tune application of local & traditional learning enriched through people's experience and feedbacks. While the intellectual supports are easy to build, it is execution on ground that is the cause of failure of many a brilliant concept.

Inner peace and quiet, the mainstays of the esoteric east are at a discount. Callous indifferent insensitive surrounds are aggravating the situation further. Nowhere than in the fast and haphazardly developing third world can this be experienced in full blast. Nowhere is the critical need of E-B studies pertinent than in the global south for betterment of a large chunk of global population through humane development (3951 words).

Acknowledgements

Deep gratitude to the organizers of AicE-Bs 2013 for this keynote invite!

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